MELAMUT, D.L., kand.tekhn.nauk

Construction of hydraulic-fill dams in land reclamation projects.
Trudy VNIIGiM 32:175-182 '59. (MIRA 13:8)
(Dams)

MELAMUT, D.L., kand.tekhn.nauk

Using hydraulic fill methods in constructing a dam on the Murgab River. Transp.stroi. 10 no.6:29-32 Je '60. (MIRA 13:7)
(Murgab River--Dams)

MELAMUT, D.L., kand.tekhn.nauk; YEROKHIN, V.D., inzh.

Using hydraulic fill methods on one side only in building the dam of a reservoir. Transp. stroi. 11 no.1:18-20 Ja '61.
(MIRA 14:1)

(Dams)

MELAMUT, D.L., kand.tekhn.nauk; SILAGADZE, V.A., inzh.

Cofferdamming by breaking up the drop. Gidr. i mel. 14 no.8: 25-30 Ag '62. (MIRA 15:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrotekhniki i melioratsii.

(Cofferdams)

MELAMUT, D.L., kand.tekhn.nauk; NIKOLAYEV, V.M., insh.

Method for calculating the stability of slopes for narrow-profile hydraulic-fill dams. Gidr. i mel. 14 no.12:43-50 D '62. (MIRA 16:5)

(Dams)

MELA'UT, David Lazarevich, kand. tekhn. nauk; NIKOLAYEV, Vasiliy Mikhaylovich, kand. tekhn. nauk; TSAREVSKIY, A.M., retsenzent, AFANAS'YEV, B.P., red. izd-va; RODIONOVA, V.M., tekhn. red.

[Hydraulic filling of narrow-profile dams and small dams in agricultural construction work] Namyv uzkoprofil'nykh damb i malykh plotin v sel'skom stroitel'stve. Moskva, Gosstroiizdat, 1963. 241 p. (MIRA 16:7)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for TSarevskiy).

(Dams)

MELAMUT, D.L., kand. tekhn. nauk; SILAGADZE, V.A., inzh.

Cofferdamming channels with local soil. Trans. stroi. 13 no.8:36-39 Ag '63. (MIRA 17:2)

MELAMUT, D.L., kand. tekhn. nauk; MENTYUKOV, V.P., inzh.

Hydraulic-file construction of dams from gravelly soils with formation of an antiseepage core. Gidr. i mel. 15 no.8:26-32 Ag '63. (MIRA 16:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrotekhniki i melioratsii im. Kostyakova.

KALIZHNYUK, S.K., inzh.; MELAMUT, D.L., kand.tekhn.nauk; SILAGADZE, V.A., inzh.

Results of cofferdamming with sand and gravel. Gidr.stroi. 34 no.11:10-15 N '63. (MIRA 17:3)

KOSTYAKOVA, A.N., nauchn. sotr.; MELAMUT, D.L., kand. tekhn. nauk, nauchn. sotr.; MENTYUKOV, V.P., inzh., nauchn. sotr.

[Hydraulic fill of dams composed of gravely soil] Namyv plotin iz gravelistykh gruntov. Moskva, Sel'khozizdat, 1963. 12 p. (MIRA 17:9)

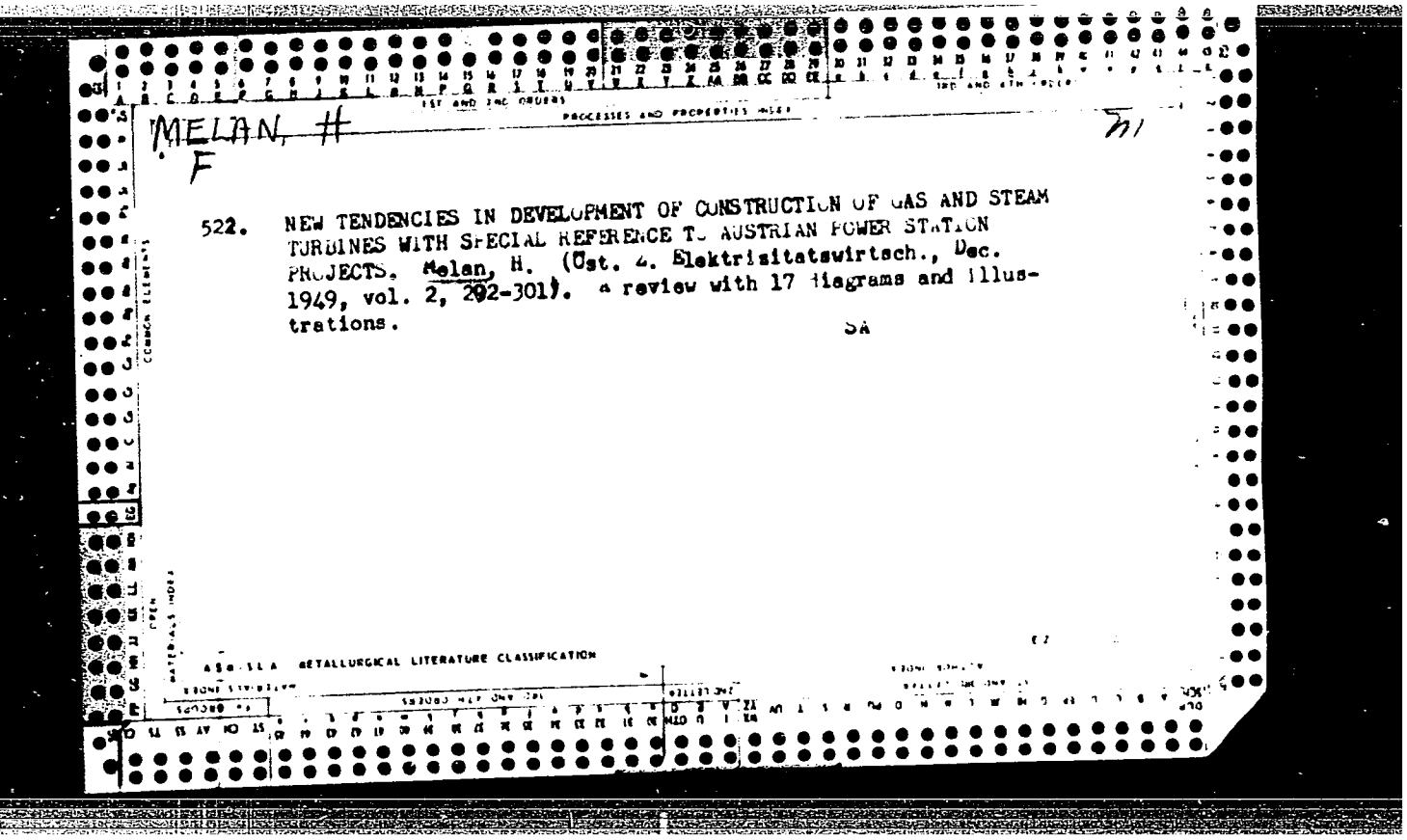
1. Russia (1923- U.S.S.R.) Ministerstvo sel'skogo khozyaystva. Upravleniye nauki, propagandy i vnedreniya peredovogo opyta. 2. Laboratoriya gidromekhanizatsii zemlyanykh rabot Vsesoyuznogo nauchno-issledovatel'skogo instituta gidrotekhniki i melioratsii.

MULLER, R.A., kand.tekhn.nauk; YUSHIN, A.I., inzh.; MELAMUT, L.Sh., inzh.

Temporary technical specifications for planning and constructing buildings and structures on ground located over mines. Shakht. stroi. 4 no. 5:29-30 My '60. (MIRA 14:4)
(Foundations) (Soil mechanics)

KOLBENKOV, S.P.; MEDYANTSEV, A.N.; IOFIS, M.A.; KOROTKOV, M.V.; MULLER, R.A.; YUSHIN, A.I.; MELAMUT, L.Sh.; KARGIN, G.P.; GERTNER, P.F.; ZARETSKIY, K.S.; CHECHKOV, L.V., red.izd-va; MAKSIMOVA, V.V., tekhn. red.

[Designing, constructing, and protecting buildings and structures on foundations undercut by mining] Proektirovanie, stroitel'stvo i okhrana zdanii i sooruzhenii na podrabatyvaemykh territoriiakh. Moskva, Gosgortekhizdat, 1963. 451 p. (MIRA 16:8)
(Earth movements and building)



MELAN, H
F

522. NEW TENDENCIES IN DEVELOPMENT OF CONSTRUCTION OF GAS AND STEAM TURBINES WITH SPECIAL REFERENCE TO AUSTRIAN POWER STATION PROJECTS. Melan, H. (Öst. Z. Elektrizitätswirtsch., Dec. 1949, vol. 2, 292-301). A review with 17 diagrams and illustrations.

SA

MELAN, H.

"Propositions for the thermodynamics of nuclear power plants."

p. 517 (Energia Es Atomtechnika) Vol. 10, no. 8/10, Dec. 1957
Budapest, Hungary

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4, April 1958

MELAN, K.G., prof. (Rostok, Germanskaya Demokraticheskaya Respublika)

In the name of peace and progress. Zdorov'e 5 no.9:9 S '59. (MIRA 12:11)
(GERMANY, EAST--PUBLIC HEALTH)

S/081/62/000/023/100/120
B101/B186

AUTHOR: Meland, Thor

TITLE: Friction and wear of plastics

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1962, 693, abstract 23P199 (Tekn. ukebl., v. 109, no. 14, 1962, 351 - 360 [Norweg.; summary in Eng.])

TEXT: Friction (F) and wear of plastics have been studied as functions of their macromolecular structure. Relations were established between F of dry gliding, the adhesion properties and the viscosity of the plastics (particularly the degree of crystallinity); also between the coefficient of F and the gliding velocity, the specific pressure, temperature, and braking time. The function of rolling F versus velocity, and the factor of dynamic losses versus frequency, were clarified. Characteristics for choosing wear-resistant plastics were determined. [Abstracter's note: Complete translation.]

Card 1/1

MELANEK, L.

"What Our Technology Gave to the World; A Comment on the Exhibit of the National Museum of Technology in Prague." p.315
"Appraisal of the Book Design and Organization of Machine Shops." Trans. from the Russian. p. 318 (Strojirenstvi, Vol. 3, no. 4, Apr. 1953, Praha)

SO: Monthly List of East European Accessions, Library of Congress, Vol. 3, No. 3 March 1954, Uncl.

MELANICH, N. (Moskva)

In search for innovations. Izobr.i rats. no.12:34 D '60.
(MIRA 13:12)
(Moscow--Technological innovations)

MELANIFIDI, G.F.

DT-1 and IT-2 thermo[illegible]. [illegible] '63. (MIRA 17:8)

1. Groznenskiy filial [illegible] i proyektno-konstruktorskogo [illegible] neftyanoy i gazovoy prom[illegible].

MELANIFIDI, G.F.

Automatic gas spray on a jet with automatic ignition. Gaz. delo no.10:47-49 '63. (MIRA 17:4)

1. Oktyabr'skiy filial Vsesoyuznogo nauchno-issledovatel'skogo i proyektno-konstruktorskogo instituta kompleksnoy avtomatizatsii neftyanoy i gazovoy promyshlennosti.

MELANIFIDI, G.F.

Automatic flushing of clarifying agents. Nefteprom. delo no.9: 24-26 '63. (MIRA 17:4)

1. Oktyabr'skiy filial Vsesoyuznogo nauchno-issledovatel'skogo i proyektno-konstruktorskogo instituta kompleksnoy avtomatizatsii neftyanoy i gazovoy promyshlennosti.

MELANIFIDI, G.F.

Automatic control of the water level in blenders. Mash. i neft. obor. no.10:18-20 '63. (MIRA 17:4)

1. Filial Vsesoyuznogo nauchno-issledovatel'skogo i proyektno-konstruktorskogo instituta kompleksnoy avtomatizatsii neftyanoy i gazovoy promyshlennosti, g. Oktyabr'skiy.

RYAPOSOV, V.V.; MELANIFIDI, G.F.

Stop device for compressors with gas motors. Gaz. delo no.10: 49-50 '63. (MIRA 17:4)

1. Oktyabr'skiy filial Vsesoyuznogo nauchno-issledovatel'skogo i proyektno-konstruktorskogo instituta kompleksnoy avtomatizatsii neftyanoy i gazovoy promyshlennosti.

MELANIFIDI, G.F.

Introducing automatic control into the reagent industry. Nefteprom. delo no.4:21-23 '64. (MIRA 17:6)

1. Oktyabr'skiy filial Vsesoyuznogo nauchno-issledovatel'skogo i proyektno-konstruktorskogo instituta kompleksnoy avtomatizatsii neftyanoy i gazovoy promyshlennosti.

MELANIFIDI, G.F.

DU-3 leak detector. Mash. i neft. obor. no.8:30 '64. (MIRA 17:11)

1. Oktyabr'skiy filial Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut kompleksnoy avtomatizatsii neftyanoy i gazovoy promyshlennosti.

MELANIFIDI, G.F.

Automatic coagulant proportioning. Mash. i neft. obor. no.9: 32-33 '64. (MIRA 17:11)

1. Oktyabr'skiy filial Vsesoyuznogo nauchno-issledovatel'skogo i proyektno-konstruktorskogo instituta kompleksnoy avtomatizatsii neftyanoy i gazovoy promyshlennosti.

MELANIFIDI, G.F.

Automatic control of the fast filters of a water purification station. Mash. i neft. obor. no.10:28-30 '64 (MIRA 18:1)

1. Oktyabr'skiy filial Vsesoyuznogo nauchno-issledovatel'skogo i proyektno-konstruktorskogo instituta kompleksnoy avtomatizatsii neftyanoy i gazovoy promyshlennosti.

MELANIFIDI, G.F.

Automatic control of the dynamic level in siphon water-supply wells. Neftepром. delo no.4:30-31 '65. (MIRA 18:6)

1. Oktyabr'skiy filial Vsesoyuznogo nauchno-issledovatel'skogo i proyektno-konstruktorskogo instituta kompleksnoy avtomatizatsii neftyanoy i gazovoy promyshlennosti.

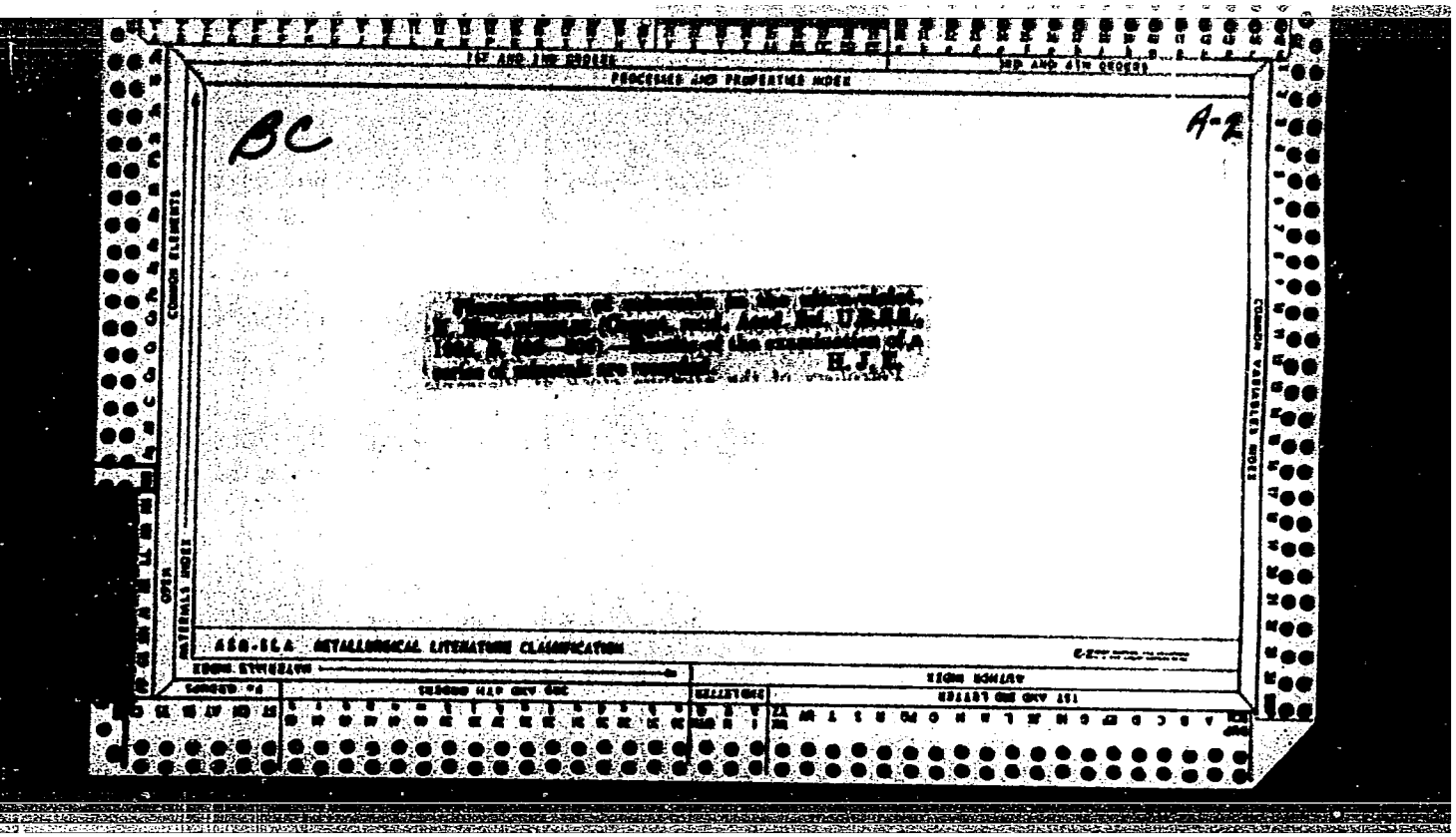
1ST AND 2ND CODES

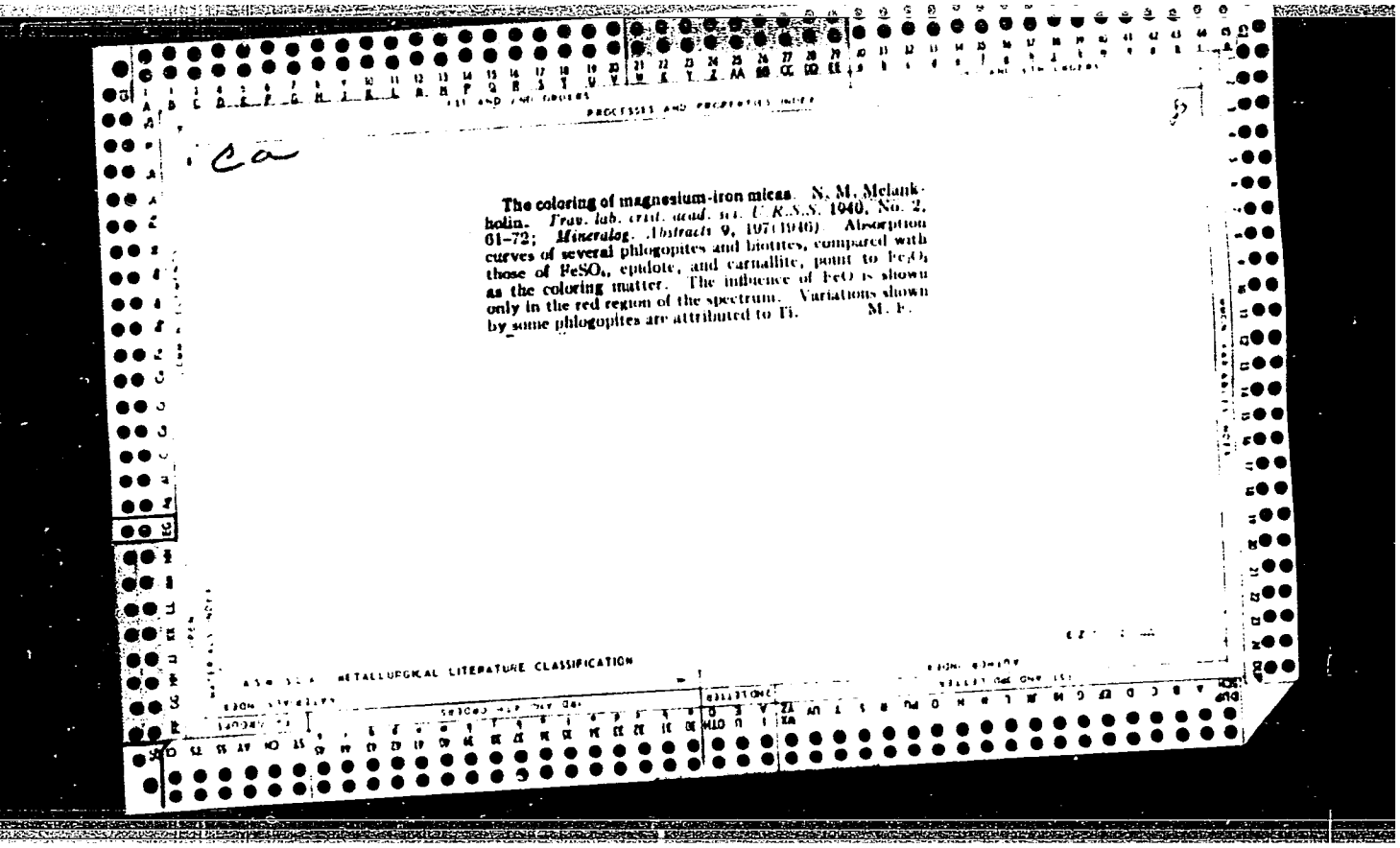
PROCESSES AND PROPERTIES INDEX

3RD AND 4TH CODES

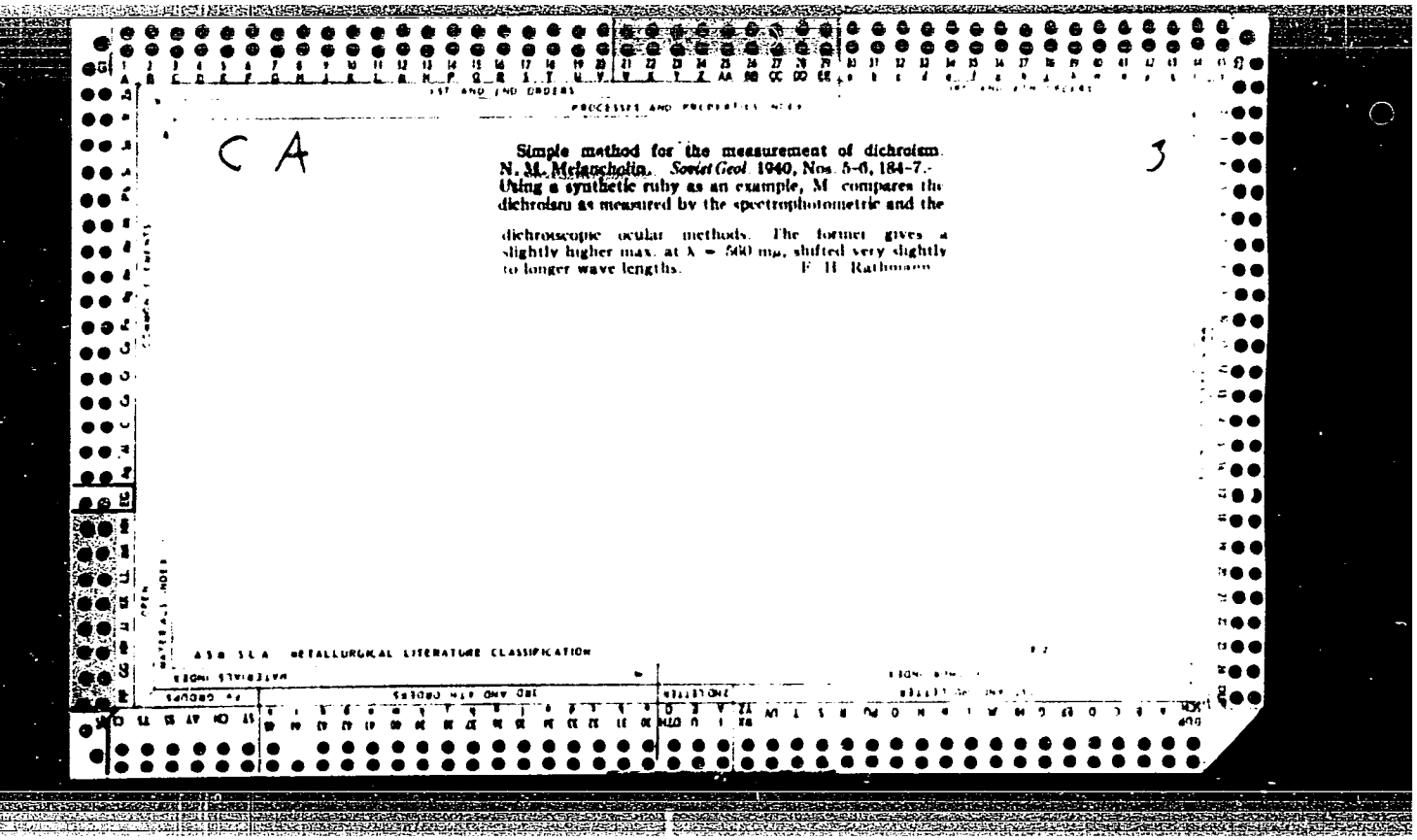
New apparatus for the method of double variation of Emmons. N. Melankholin. *Mineral. Syr'e* 7, No. 11/12, 81-3(1932). The Emmons set-up for the detn. of the n of minerals by the immersion method was simplified. Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION





The coloring of magnesium-iron micas. N. M. Melankholin. *Trav. lab. cristl. acad. sci. U.R.S.S.* 1940, No. 2, 61–72; *Mineralog. Abstracts* 9, 197 (1940). Absorption curves of several phlogopites and biotites, compared with those of $FeSO_4$, epidote, and carnallite, point to FeO as the coloring matter. The influence of FeO is shown only in the red region of the spectrum. Variations shown by some phlogopites are attributed to Ti. M. F.



CA

3

Simple method for the measurement of dichroism. N. M. Melancholin. *Soviet Geol* 1940, Nos. 5-6, 184-7.- Using a synthetic ruby as an example, M compares the dichroism as measured by the spectrophotometric and the dichroscopic ocular methods. The former gives a slightly higher max. at λ = 560 mμ, shifted very slightly to longer wave lengths. F. H. Rathmann

ASM STEEL METALLURGICAL LITERATURE CLASSIFICATION

CA

The absorption curve of iron oxide in minerals. N. M. Melankholin (Inst. Mineral Raw Materials, Moscow) *Zapiski Vserossiiskogo Mineral. Obshchestva* (Mém. soc. russe minéral.) **75**, 89-93(1946); *Chem. Zentr.* (Russian Zone Ed.) **1948**, I, 527.—Measurements were made of the absorption of hematite inclusions in muscovite, red sylvite, the pigment formed from kaolin and Fe_2O_3, artificial carnelian, and sphalerite. The results showed good agreement, the curves showing 3 narrow, low max. at about 450, 480, and 515 mμ. In yellow corundum these were displaced somewhat downward. Epidote and green demantoid showed a sharp max. at about 430 mμ.

M. G. Moore

CA

New model of a polarization interferometer for the microscope. N. M. Melnikhudin. *Zavodskaya Lab.* 13, 405-7(1947).--An app. involving 2 quartz plates cut at 45° to the optical axis, and a half-wave plate, can be attached to any microscope for the detn. of refractive indexes. N. Thon

MELANKHOLIN, N.M., inzhener.

Optical method of controlling the thickness of mica sheets. Vest.elektroprom. 18 no.6:23-24 Je '47. (MLRA 6:12)

1. Institut kristallografii Akademii nauk SSSR.

(Mica)

MELANKHOLIN, N.M.

The coloration of micas. Trudy Inst. Krist., Akad. Nauk S.S.S.R. 4, 223-9 '48.
(CA 47 no.13:6313 '53)

MELANKHOLIN, N. M.

Refraction index measurement under microscope by immersion method. Moskva, Izd-vo Akad. nauk S.SR, 1949. 99 p. (51-21080)

QE4 .3.5.M4

MELANKHOLIN, N. M.

Refractive Index

Application of new model of polarization interferometer for measuring indices of refraction of immersion media. Trudy Inst. krist., No. 5, 1949.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

PA 3/50T39

USSR/Geology - Coal Sep/Oct 49
Carbon, in Coal

"Determining the Degree of Carbonification (Coal Rank) of Mineral Coals by Measuring Their Elliptical Polarization Constant," N. M. Melankholin, 8 pp

"Iz Ak Nauk SSSR, Ser Geol" No 5

Degree of carbonification, quantitively characterized by content of volatile components and carbon in coal, determines commercial grade of coal. Attempted to establish relation between degree of carbonification and optical constants of coals, particularly constants of elliptical polarization (angles of polarization), for specimen of coals of various grades from the Donets Basin. To measure these constants, a special instrument was made by adding a number of devices to a single-circle goniometer. Results of measurements showed a definite relationship between values of the constant and content of carbon and volatile components in the coal. Established dependence of the constant upon petrographic composition of coals. Due to unavoidable emergence of thin-absorption films on surface of coals, measured values for elliptical polarization constant are not absolutely correct. However, they can be used successfully to determine grade of coal, thus replacing chemical analysis by optical analysis.

3/50T39

MELANKHOLIN, N. M.

USSR/Geology - Coal (Contd 2) Sep/Oct 49

3/50T39

1. MELANKHOLIN, N. M.; RUDNITSKAYA, YE. S.

2. USSR 600

4. Quartz

7. Optical properties of a Rochon quartz prism, Trudy Inst. krist, No. 7, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

1. MELANKHOLIN, N. M.

2. USSR (600)

4. Crystallography

7. Some properties of an obliquely orientated quartz wedge. Trudy Inst.krist., no. 7, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

MELANKHOLIN, N. M.

Crystallography

A daption of a Berek compensator to obliquely oriented cuts of minerals. Zap. Vses. min. ob. 81 no. 1:54-55 '52

Monthly List of Russian Accessions, Library of Congress, July 1952. Unclassified

MELANKHOLIN, N.M.

Measurement of the refractive index of synthetic corundum and the corundum batch. Trudy Inst.krist. no.8:57-76 '53. (MLRA 7:5)
(Corundum) (Refractive index)

MELANKHOLIN, N.M.

Use of Toepler's method for the study of nonhomogeneity in synthetic corundum crystals. Trudy Inst.krist. no.8:189-192 '53. (MLRA 7:5)
(Corundum)

MELANKHOLIN, N.M.

PHASE I TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 468 - I

BOOK Call No.: AF637791

Authors: MELANKHOLIN, N. M. and GRUM-GRZHIMAYLO, S. V.
Full Title: METHODS OF INVESTIGATING THE OPTICAL PROPERTIES OF CRYSTALS
Transliterated Title: Metody issledovaniya opticheskikh svoystv kristallov

PUBLISHING DATA
Originating Agency: Academy of Sciences, USSR. Institute of Crystallography
Publishing House: Academy of Sciences, USSR
Date: 1954 No. pp.: 192 No. of copies: 3,500
Editorial Staff
Editor: Vedeneyeva, N. Ye., Doctor of Phys. and Math. Sci.
Others: The staff of the Institute of Crystallography of the Ac. of Sci., USSR, and the staff of the crystallography laboratory previously with the All-Union Scientific Institute for Research in Minerals.

PURPOSE: This is a textbook dealing with optical methods for investigating crystals and for measuring their optical constants. It is intended mainly for workers in scientific research institutes and factory laboratories investigating crystals and all kinds of crystalline products, raw material and semi-products. It can also be used as a textbook for petrographic studies.

Metody issledovaniya opticheskikh svoystv kristallov AID 468 - I

TEXT DATA
Coverage: This is the latest Soviet textbook on optical crystallography. It covers: methods of obtaining polarized light (polarizers); the polarizing microscope; measurements of the refractive indexes of crystals (immersion and other methods); measurement of the rotating plane of polarization of light in crystals; investigation of the absorption of light by crystals (color and pleochroism of crystals); and orientation of crystals and their investigation in converging and parallel polarized light by means of special apparatuses. The methods and apparatuses outlined are those applied to transparent, colorless and slightly absorbing crystals, which can be investigated with transparent light. Thus, methods of investigation of crystals with metallic absorption which require the study of reflected light are not covered in this book.
No. of References: 22, Russian 17 (1913-1952), Foreign 5 (1914-1950)
Facilities: None

2/2

USSR/Physics MELANKHOLIN, N.M. - Relaxation, Measuring Instruments FD 367

Card 1/1

Author : Regal', V. R. and Melankholin, N. M.

Title : Rigid optical dynamometer

Periodical : Zhur. tekh. fiz. 24, 454-459, Mar 1954

Abstract : Describes dynamometer for measuring stress relaxation in compressed specimens. Compressing force is measured by determination of double refraction in a crystal-measurer which is made of a single crystal of TlI-TlBr solid solution. Design is based on sufficiently high rigidity of crystal-measurer, so its deformation is considerably lower than that of test specimen. Instrument, being equipped with special optical system, is used in combination with microscope and serves for plotting relaxation characteristics of various materials. One USSR reference since 1953. Illustrations.

Institution :

Submitted : October 16, 1953

Category : USSR/Optics - Physical Optics K-5

Abs Jour : Ref Zhur - Fizika, No 1 1957, No 2310

Author : Melankholin, N M

Title : New Instrument for Optical Orientation of a Quartz Pebble

Orig Pub : Tr. In-ta kristallogr. AN SSSR 1955 vyp. 11, 239-242

Abstract : Description of a simple instrument for the determination of the orientation of the optical axis of a quartz pebble; this axis coincides with the principal crystallographic axis of the quartz crystal. The direction of the principal axis is first determined approximately, and then a slab, approximately parallel to the optical axis, is cut from the pebble. The arrangement of the instrument permits rotation of such a slab in its plane, inclination of the slab about its parallel axis, and simultaneous observation of the conoscopic figure that is directly visible to the eye when the slab is located between crossed polaroids. By mounting the optical axis of the slab vertically, it is thus possible to measure the direction and the angle of inclination of the axis relative to the normal to the slab with an accuracy to 0.25°. From these data it is possible to obtain a cut on the tested pebble perpendicular to the optical axis, and to determine the directions of the electric axis on the pebble. The same instrument can also be used to determine the sign of the rotation of the plane of polarization in the tested pebble, by rotating the upper polaroid or by introducing an additional quartz plate.

Card : 1/1

MELANKHOLIN, N. M.

USSR/Physics - Crystals disruption FD-3252

Card 1/1 Pub. 146 - 11/44

Author : Melankholin, N. M.; Regel', V. R.

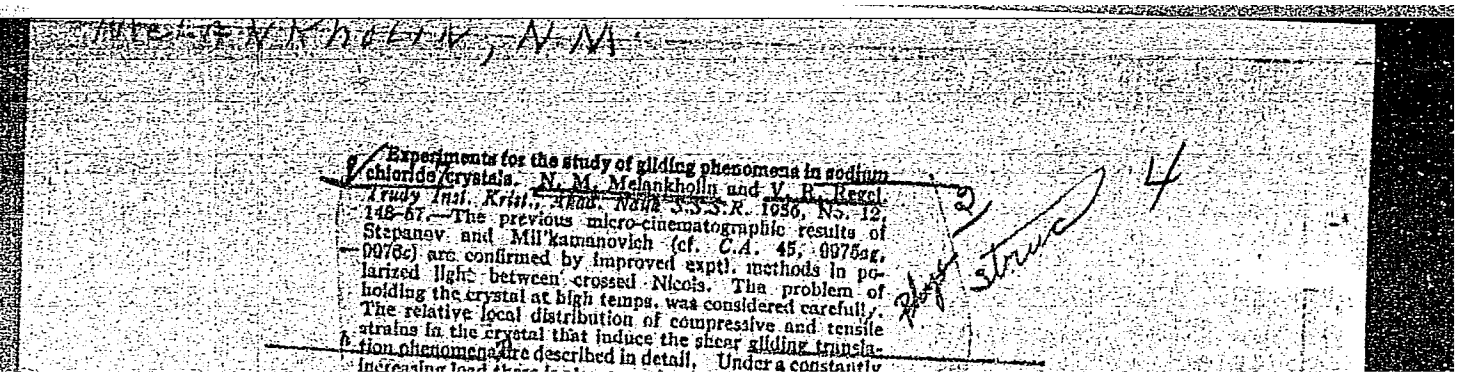
Title : Experience gained in an investigation of the process of disruption of NaCl crystals

Periodical : Zhur. eksp. i teor. fiz., 29, No 6(12), Dec 1955, 817-821

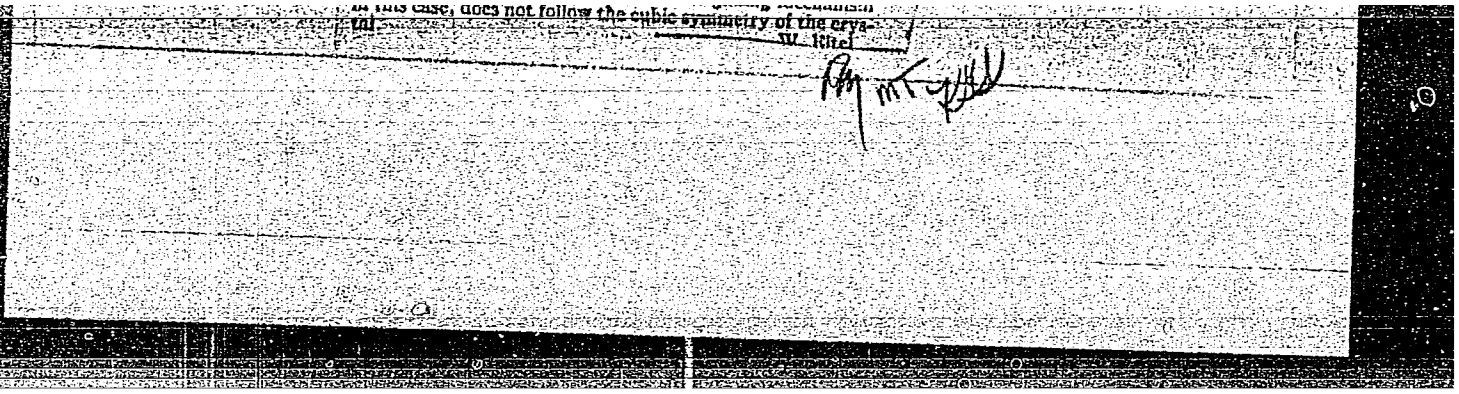
Abstract : An investigation, by the method of cinematography under polarized light, of the process governing the development of fissures during stretching of specimens of NaCl single-crystals. It is shown that the fissures are propagated in jump-like fashion. The development of fissures is prevented by the shear bands, which must be intersected by the fissures. The authors assume that the prevention of the propagation of fissures is caused by those regions of the shear bands in which compressing stresses exist. The regions of the shear bands with tensile stresses evidently must not prevent the development of fissures. The authors thank Professor M. V. Klassen-Neklyudova for her advice. Twelve references: e.g. M. V. Klassen-Neklyudova, ibid., 6, 584, 1936.

Institution : Institute of Crystallography, Academy of Sciences USSR

Submitted : June 14, 1954



Experiments for the study of gliding phenomena in sodium chloride crystals. N. M. Melankholin and V. B. Regel. *Trudy Inst. Kristal., Akad. Nauk S.S.S.R.* 1956, No. 12, 148–67.—The previous micro-cinematographic results of Stepanov and Mil'kamanovich (cf. *C.A.* 45, 9975ag, 9976c) are confirmed by improved exptl. methods in polarized light between crossed Nicols. The problem of holding the crystal at high temps. was considered carefully. The relative local distribution of compressive and tensile strains in the crystal that induce the shear gliding translation phenomena are described in detail. Under a constantly increasing load there [illegible]



USSR/Optics -Optical Methods of Analysis. Instruments. K-7

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 13135

Author : Melankholin, N.M., Grechushnikov, B.N.

Inst : Institute of Crystallography, Academy of Sciences, USSR

Title : New Photoelectric Microspectraphotometer.

Orig Pub : Tr. in-ta Pristallogr. AN SSSR, 1956, vyp. 12, 186-191

Abstract : To investigate the absorption spectra of various small crystals of organic dyes (up to 0.03 mm in diameter), a photoelectric microspectraphotometer was constructed. The source of monochromatic light is the UM-2 monochromator, and the receiver is a FEU-19 photomultiplier. The darkness current of the photomultiplier is compensated for. The instrument can be used for the investigation of the absorption spectra of all microcrystals or biological objects, and also for the spectraphotometric

Card 1/2

Abs Jour : Ref Zhur - Fizika, No 5, 1957, 13135

MELANKHOLIN, N. M.

Colors of amphiboles. N. M. Melankholin. *Zapiski Vsesoyuz. Mineralog. Obshchestva* 85, 218-23(1956).—The absorption curves for a series of amphiboles were detd. with a photoelec. spectrophotometer, and the photometer eyepiece was adapted to a polarization microscope (cf. Melankholin (1940)). The ordinates of the curves are the optical da. $D = \log I_0/I$, as a function of the wave length of the visible light. The measurements were made for the principal indicatrix axes, γ and α, also the pleochroism was detd. The investigated amphiboles were: green and brown hornblende, basaltic hornblende, edenite, arfvedsonite, glaucophane, and actinolite, chiefly from mineral deposits of the Ukraine and Kamchatka. The curves show in most cases distinctly the superposition of the characteristic absorption of the Fe^{2+} and Fe^{3+} cations (cf. Kolbe, *C.A.* 29, 5777*e*; Melankholin, *C.A.* 44, 7717*e*). Specific effects of the compn. are discussed for the extinction curves of glaucophane in which the Na^+ cations exert some polarization on the O^{2-} anions surrounding the Fe^{2+} color centers. A deep min. of absorption is characteristic at 500 mμ and a distinct shifting of the absorption max. in infrared and red to the violet end of the visible spectrum. The curves for arfvedsonite are similar, although the max. in red is not so strongly shifted as in glaucophane; the anisotropy of the absorption is more distinct than in glaucophane. The transition of the absorption phenomena in green to brown hornblendes is continuous; the curves for the green hornblendes are rather similar to those of arfvedsonite. The higher the contents in Fe^{3+} the more the typical curves of brown hornblende are observed, with a rather flat min. above 600 mμ. In the deep-brown basaltic hornblendes this min. is in the infrared, and the curves for γ and α absorption are symbatic. Actinolite shows only very flat curves for α and γ, without distinct max. or min. Al^{3+} does not affect the character of the absorption curves for the Fe-contg. amphiboles. The relative

1/2

MELANKHOLIN, N. M.

distances between the α and γ curves are a measure for the degree of dichroism; they are different in glaucophane-arfvedsonite, and the hornblende-amphiboles. In the first group the dichroism is stronger in the red, in basaltic it is stronger in the green-blue portions of the spectrum, in green hornblendes it is intermediate. Evidently, the position of the Fe^{3+} cations in groups $[FeO_4]$ is different from that of the Fe^{3+} cations in the structure of the amphiboles, with respect to the $[Si_4O_{11}]$ ribbons. W. Eitel

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Меланхолин, Н. М.

USSR/Physical Chemistry. Molecule. Chemical bond. B-4

Abs Jour : Ref Zhur - Khimiya No 7, 1957, 21979

Author : Melankholin, N. M.
Inst : None
Title : Absorption spectra of methylene-blue crystals.

Orig Pub : Dokl. AN SSSR 1956, 108, No 2, 247-250

Abstract : The absorption spectra of microcrystals of methylene blue (up to 20 μ in diameter) were investigated in polarized light. Because of the different orientation of monoclinic crystals of this dyestuff, which are formed on glass when a drop of solution is evaporated, the spectrum components with polarization of incident height along all three axis of indices were obtained. The highest absorption was found when the light was polarized along the axis of largest refraction index, which coincides with the crystalline axis. The absorption band has a maximum around 550mμ and corresponds to band around 656mμ in the spectrum of solution. When the light was polarized along the axis of smallest light refraction a maximum around 620m was found. The absorption curve for light vibration parallel to the middle refraction index has a maximum

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USSR/Physical Chemistry. Molecule. Chemical bond. B-4

Abs Jour : Ref Zhur - Khimiya No 7, 1957, 21979

around 405mμ. Besides the absorption bands for vibrations directed along the crystalline axis, there is another band with maximum around 490Mμ, corresponding to a direction of vibration, which is under an angle to the axis. Presence of this band, according to the author, indicates that the form of area of absorption of crystal is not shaped like an elipse or oval, but resembles the area of crystal's elasticity. The author associates the 550mμ band with molecular absorption of the dyestuff, calling the other 3 absorption bands - 620, 490 and 405mμ - pure crystalline ones.

Card 2/2 -10-

PRIKHOT'KO, A F

24(7) P 3 PHASE I BOOK EXPLOITATION SOV/1365

L'vov. Universytet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii. t. 1: Molekulyarnaya spektroskopiya (Papers of the 10th All-Union Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy) [L'vov] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies printed. (Series: Its: Fizychnyy zbirnyk, vyp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii. Ed.: Lazer, S.L.; Tech. Ed.: Saranyuk, T.V.; Editorial Board: Landsberg, G.S., Academician (Resp. Ed., Deceased), Neporent, B.S., Doctor of Physical and Mathematical Sciences, Fabelinskiy, I.L., Doctor of Physical and Mathematical Sciences, Fabrikant, V.A., Doctor of Physical and Mathematical Sciences, Kornitskiy, V.G., Candidate of Technical Sciences, Candidate of Physical and Mathematical Sciences, Rayskiy, S.M., Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K., Candidate of Physical and Mathematical Sciences, Milyanchuk, V.S., A. Ye., Candidate of Physical and Mathematical Sciences, and Glauberman,

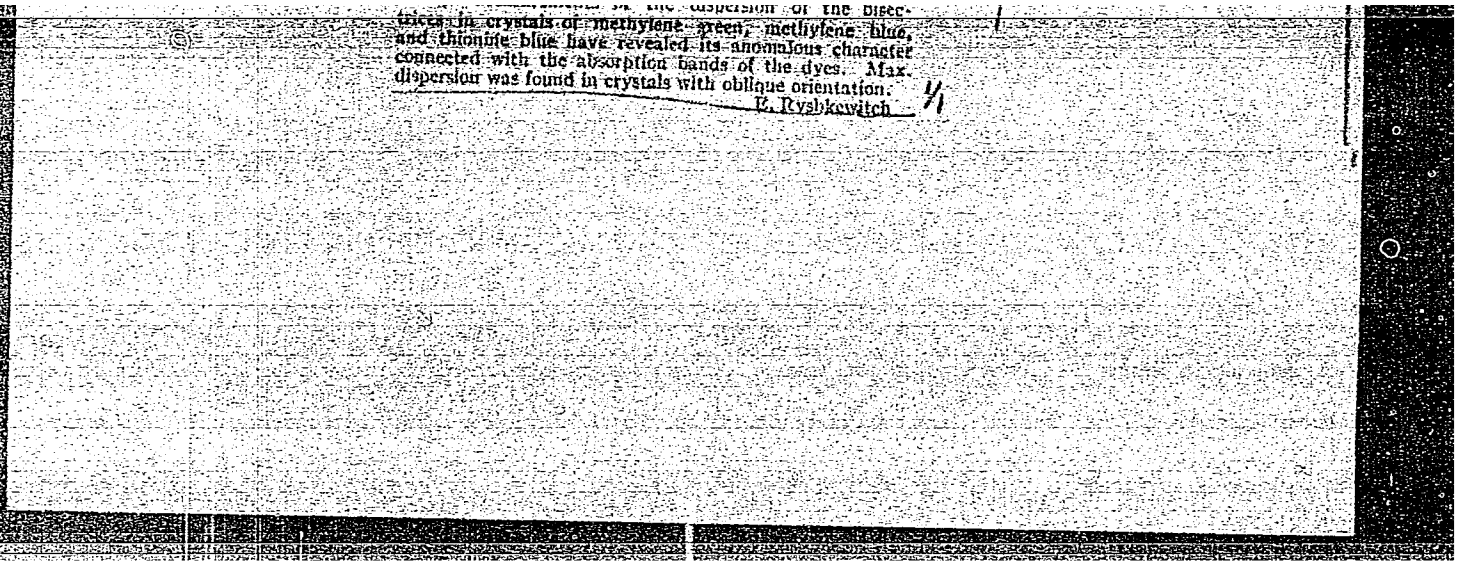
Card 1/30

Card 11/30

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033330003-5"

MELANKHOLIN, N. M.

1 Anomalous dispersion of the bisectrices of organic dye crystals. N. M. Melankholin. *Kristallografiya* 2, 78-82 (1957).—Measurements of the dispersion of the bisectrices in crystals of methylene green, methylene blue, and thionine blue have revealed its anomalous character



trices in crystals of methylene green, methylene blue, and thionine blue have revealed its anomalous character connected with the absorption bands of the dyes. Max. dispersion was found in crystals with oblique orientation.

E. Ryshkewitch

51-2-2/15

AUTHOR: Melankholin, N.M.

TITLE: Absorption spectra of thiazine-dye crystals. (Spektry pogloshcheniya kristallov tiazinovykh krasiteley).

PERIODICAL: "Optika i Spektroskopiya" (Optics and Spectroscopy) 1957, Vol.3, No.2, pp.104-114 (U.S.S.R.)

ABSTRACT: Study of absorption spectra in the range 400-650 mμ of three organic dyes: methylene blue, new methylene blue and methylene green. This work is an extension of the investigation of absorption of monocrystals of the above three dyes by N.E.Vedeneeva and E.N.Slavnova (2) (the data obtained by these two authors were not very precise). A microspectrophotometer consisting of a monochromator, a polarizing microscope and a photomultiplier was used. Since strongly pleochroic crystals should be studied in nearly parallel light, diaphragms were used at the microscope objective and at the condenser so that angle of convergence of light was about 5-6° in the crystal (placed on the object stage of the microscope). The crystals were prepared by slow evaporation of an aqueous solution of the dye placed on an object slide. On one slide crystals of various habits and orientations were obtained.

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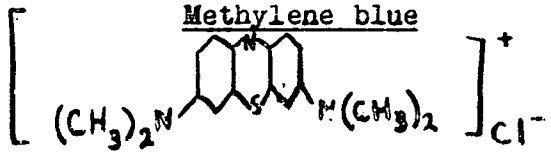
Absorption spectra of thiazine-dye crystals. (Cont.) 51-2-2/15

Methylene blue



crystallizes as long prisms with their c-axis approximately parallel to the slide surface. In addition to crystals oriented films of methylene blue (Demon (4)) were studied. Absorption curves for vibrations parallel to the N_m (i.e. almost parallel to the c-axis) and N_p (i.e. almost parallel to the a-axis) axes of the optical indicatrix were found using monocrystals. Since the vibrations parallel to the N_g indicatrix axis (and the crystal b-axis are strongly absorbed, oriented films were used. These films, prepared by rolling a glass rod wetted with dye solution across a heated slide, consist of similarly oriented crystallites whose a and N_p axes are perpendicular to the glass slide. The absorption curves obtained are in Figs. 1, 2 and 3. For the vibrations parallel to N_g a strong absorption maximum occurs at about 550 mμ (Fig.1). A gentle maximum is observed around 615 mμ for the vibrations parallel to the N_p axis (Fig.2). A maximum at 405 mμ is found for the vibrations parallel to N_m (Fig.2). A further

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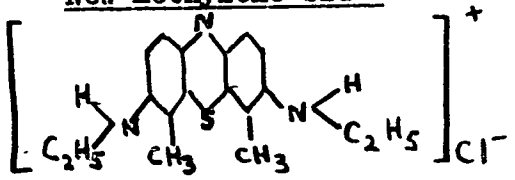
Absorption spectra of thiazine-dye crystals. (Cont.)

maximum (Fig.3) at 490 mμ corresponds to vibrations which are in the N_g-N_m plane but lie in two directions symmetrical with respect to the N_g and the N_m axes. The most intense absorption band at 550 mμ is a strongly displaced molecular band and the others are due to intermolecular bonds in the crystal.

New methylene blue.



results are given in Figs.4, 5 and 6. It was not possible to assign the absorption curves to crystallographic directions, since the crystal structure of new methylene blue (and methylene green) is not yet known. The absorption maxima occur at about 640 mμ for the vibrations parallel to N_g (Fig.4) and at 570 mμ for N_m (Fig.5). For the vibrations parallel to N_p two repeatable sets of maxima are obtained: at 595 mμ for the N_p-N_m crystal cut (Fig.5) and at 605 mμ for the N_g-N_p cut (Fig.4). Fig.6 shows the results for directions which are

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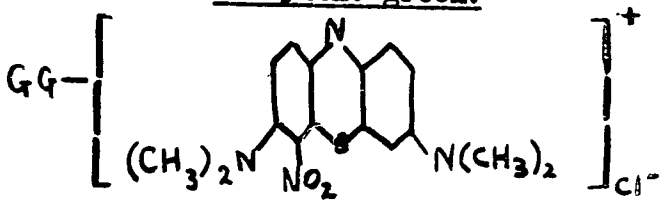
Absorption spectra of thiazine-dye crystals. (Cont.)

oblique with respect to the indicatrix axes.

Methylene green.



crystals were of one modification but of various orientations on the glass slide. The results are given in Figs.7, 8 and 9. Because of strong absorption and large dispersion of the optical axes and bisectors the absorption could be related to the indicatrix axes only approximately. Two maxima at 590 (the strongest for methylene green) and 455 mμ occur for the vibrations roughly parallel to N_g (Fig.7, 1). For the N_p axis (Fig.7, 2) weak maxima occur at 590, 560 and 455 mμ, and for the N_m axis (Fig.8, 1) two maxima at 532 (strong) and 440 mμ (weak). Fig.8, 2 shows absorption (maxima at 532 and 430 mμ) for the vibrations slightly inclined to the N_p axis. The short-wave maxima (430 to 460 mμ) which appear in all the curves are

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Absorption spectra of thiazine-dye crystals. (Cont.)

assigned to vibrations oblique with respect to the indicatrix axes. Fig.9 shows absorption curves for a cut near to the N_g-N_m plane. The results obtained indicate that absorption by the dye crystals studied here can be due to molecular and crystalline (i.e. intermolecular bonds in crystals) properties. When the crystal structure is known (methylene blue) the molecular bands can be identified. A characteristic property of the crystals studied is the occurrence of absorption bands corresponding to vibrations oriented obliquely with respect to the indicatrix axes. All the three dyes exhibit strong absorption bands at 550-570 mμ for one of the vibration directions perpendicular to the longitudinal axis of the crystal. For both (1) methylene blue and (2) new methylene blue, the absorption bands are strongly polarized; the absorption band for vibrations parallel to the short axis of the molecule lies in the short-wave region for the former and in the long-wave region for the latter. The methylene green (3) bands are weakly polarized. The differences between (1) and (2) on one hand and (3) on the other are due to different molecular symmetries. (1) and (2) possess a second-order symmetry axis along the

Absorption spectra of thiazine-dye crystals. (Cont.)

short axis of the molecule through N and S atoms, while in (3) the symmetry is affected by the presence of NO_2. There are ten figures and ten references (eight of which are Slavic).
References cited: (2) and (4).

SUBMITTED: December 3, 1956.
ASSOCIATION: Crystallographical Institute, Academy of Sciences of the U.S.S.R.
AVAILABLE: Library of Congress

Card 6/6

SOV/51-5-4-12/21

AUTHOR: Melankholin, N.M.

TITLE: Absorption Spectra of Solid Films of Organic Dyes (Spektry pogloshcheniya tverdykh plenok organicheskikh krasiteley)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol 5, Nr 4, pp 435-439 (USSR)

ABSTRACT: Because of the small dimensions and non-uniformities of films the author constructed a special very sensitive photoelectric microspectrophotometer with a photoelectric multiplier. This microspectrophotometer was used to obtain the absorption spectra of film areas 0.02 mm in diameter. All the films studied were prepared by slow evaporation of an aqueous solution on a microscope object slide. Oriented films of methylene blue were prepared by Demon's method (Ref 6) by rolling a glass rod wetted with a dye solution across a heated glass slide. Certain of the dyes studied, such as thionine violet produce only crystalline films, other dyes (e.g. thionine blue) produce only amorphous layers which become crystalline after a certain time. Methylene blue layers may be either crystalline or amorphous. The absorption curves of methylene blue are shown in Figs 1 and 2, those of methylene green in Fig 3, and of thionine dyes in Fig 4. In Figs 1, 2 and 4 the letters "a" and "b" refer to measurements at two mutually perpendicular directions of polarized light. Oriented

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methylene blue layers were found to be crystalline (Fig 1, curves 1, 2; Fig 2, curves 2), but amorphous layers, blue in colour, could be also obtained (Fig 2, curves 1). Methylene green layers (Fig 3, curve 1 represents blue layers and Fig 3, curve 2 represents rose layers) were obtained in the oriented crystalline form. Thionine violet (Fig 4, curves 1) and toluidine blue form crystalline layers, which are not necessarily oriented. Thionine blue (Fig 4, curve 2) and Capri blue form amorphous layers. The crystalline layers consist of microcrystallites of various forms, which may be oriented along one direction. The amorphous layers consist of disordered aggregates of dimer molecules of a dye and of water molecules. There are 4 figures, and 7 references, 6 of which are Soviet and one American.

ASSOCIATION: Institut kristallografii, AN SSSR (Institute of Crystallography, Academy of Sciences of the U.S.S.R.)

SUBMITTED: October 28, 1957.

Card 2/2 1. Dye films--Spectra 2. Microspectrophotometers--Applications

Malakhova, V. M.

24(2) PHASE I BOOK EXPLOITATION SOV/2353

Akademiya nauk SSSR. Institut kristallografii

Rost kristallov, tom. 2 (Growth of Crystals, Vol. 2) Moscow, 1959. 238 p.
Errata slip inserted. 2,000 copies printed.

Resp. Eds.: A. V. Shubnikov, Academician, and N. N. Sheftal', Doctor of Geological and Mineralogical Sciences; Ed. of Publishing House: K. S. Aleksandrov; Tech. Ed.: T. V. Polyakova.

PURPOSE: This book is intended for scientists and researchers engaged in crystallography and in growing industrial monocrystals.

COVERAGE: This is the second of two volumes on crystal growth. The first volume contained reports delivered at the First Congress on Crystal Growth. The present volume also contains an extensive study of corundum synthesis by S. K. Popov [deceased]. These studies reflect the development of Soviet research in crystallography in the period following the first congress. The studies contain some essentially new results obtained by Soviet scientists. The editors express the hope that these studies will unite the efforts of Soviet scientists engaged in studying the process of crystal growth and in grow-

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ing industrially valuable monocrystals. No personalities are mentioned. References are given at the end of each article.

TABLE OF CONTENTS:

SOV/70-4-4-15/34

AUTHORS: Melankholin, N.M. and Slavnova, Ye.N.

TITLE: Regularities in the Take-up of Capri Blue By Growing Crystals of Lead Nitrate

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 4, pp 563-570 (USSR)

ABSTRACT: A spectrophotometric method was used to study the capture of Capri blue (as illustrated on p 563) by growing crystals of $Pb(NO_3)_2$ and to construct the corresponding adsorption curve. The appearance of the crystals depended on the concentration of dye in the solution. It was shown that the dye exists in the lead nitrate crystals as sub-microscopic crystallites. Crystal-optical studies of the lead nitrate crystals disclosed different physical properties for the positive and negative tetrahedra. Lead nitrate crystals were grown at room temperature with dye concentrations of 2.0×10^{-3} to 0.50 weight %. Dye is only adsorbed when its concentration is $> 10^{-2}$ %. Concentrations of up to 10^{-1} % crystals grow as cubotetrahedra and for higher concentrations as cubes. The colouring of all faces is not the same and the growth pyramids of the cube faces are

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Regularities in the Take-up of Capri Blue By Growing Crystals of Lead Nitrate

intensely coloured even at small concentrations. The absorption spectrum of the dye as adsorbed corresponds neither to that of the monomer nor to that of the dimer molecules but to that of the crystalline material. The orientation of the molecules can be deduced from the dicroism. This orientation is the same in all parts of the crystal. There are 7 figures, 1 table and 4 Soviet references.

ASSOCIATION: Institut kristallografii AN SSSR (Institute of Crystallography of the Ac.Sc., USSR)

SUBMITTED: March 17, 1959

24.7100

AUTHORS: Melankholin, N. M., Abramovich, ... G.

TITLE: Optical Identification of the Crystalline Modifications of Indanthrene Blue RS. Brief Communication

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 6, pp 943-[illegible], (USSR)

ABSTRACT: As shown by Ye. N. Belova (Crystallographical Institute of the Academy of Sciences, USSR), the powder diffraction patterns of the known four crystalline modifications of indanthrene blue RS differ sufficiently to identify them, except in the case of γ and δ modifications whose diffraction patterns are very close to each other. By crystal optical and spectrophotometric study of the crystals and of a number of trade specimens, the authors found that dry specimens can be identified optically. As can be seen under a polarization microscope, α and δ form well-shaped crystals, while β and γ occur in amorphous-looking formless aggregates in which

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Optical Identification of the Crystalline Modifications of Indanthrene Blue RS. Brief Communication

77128
SOV/70-4-6-17/31

only a few poorly-shaped crystalline grains can be seen. Fine prismatic α has strong double refraction and weak dichroism, while the rhombic fine platelets of δ show strong pleochroism from light blue to dark violet, and weak double refraction. Absorption curves of α and γ, obtained by automatic spectrophotometer SF-2m, show definite maxima within the range of visible spectrum, i.e., α at 625 mμ and γ at 590 mμ. No clear maximum appears in the absorption curves of β and δ (Fig. 1). Combining the data of the absorption curves with those obtained by polarization microscopic study, the 4 modifications could be identified in trade specimens. There is 1 figure; and 2 references, 1 Soviet, 1 German.

Inst. Crystallography, AS USSR
Sci. Res. Inst. Organic Intermediate Products & Dyes

Card 2/4

SOV/51-7-4-10/32

AUTHOR: Melankholin, N.M.

TITLE: Absorption Spectra of Crystals of Certain Thiazine and Oxazine Dyes.

PERIODICAL: Optika i spektroskopiya, 1959, Vol 7, Nr 4, pp 498-504 (USSR)

ABSTRACT: The present paper is a continuation of earlier work (Refs 1-3). It reports results obtained for two thiazine dyes (thionine blue and toluidine blue) and one oxazine dye (Capri blue). Crystals of these dyes were produced by slow evaporation of drops of their aqueous solutions. The absorption curves of all these dyes were obtained by means of a specially constructed photoelectric microspectrophotometer (Ref 4). This instrument made it possible to carry out measurements on crystals of 0.02 mm dimensions in a polarized beam of 9° aperture in air. Since the thickness of the crystals used could not be measured exactly and their surfaces were poor, the absorption coefficients were not calculated and all the absorption curves are shown in the form of the dependence of the optical density on wavelength (400-800 mμ). These absorption curves are given in Figs 1-5; they represent absorption of light vibrations oriented in various ways with respect to the crystal axes. In crystals of thionine blue absorption bands at 535 and 560 mμ were observed only at oblique orientations of the light beam with respect to the principal axes of the optical indicatrix and were absent in the

Absorption Spectra of Crystals of Certain Thiazine and Oxazine Dyes

absorption spectra corresponding to the two symmetric orientations. Another peculiarity of the absorption spectrum of thionine blue was the variation of the positions of the absorption bands, corresponding to vibrations more or less parallel to the principal axes of the optical indicatrix, with the direction of the wave normal. The latter property is discussed in some detail. Apart from the absorption spectra the author studied also dispersion of the indicatrix axes in the dye crystals. Such dispersion was reported earlier for thionine blue (Ref 3). Crystals of Capri blue also had high dispersion. Measured dispersion of the extinction angle in Capri blue (Fig 6) shows that this dispersion, and consequently the dispersion of the indicatrix axes, is anomalous. There are 6 figures, 3 structural formulae and 5 Soviet references.

SUBMITTED: February 26, 1959

MELANKHOLIN, N.M.

Liquid crystals of thiazine dyes. Kristallografiia 6 no.4:568-575 Jl-Ag '61. (MIRA 14:8)

1. Institut kristallografii AN SSSR.
(Liquid crystals) (Thiazine)

MELANKHOLIN, N.M.

New data on absorption spectra of thiazine dyes. Opt. i spektr. 11 no.2:286-289 Ag '61. (MIRA 14:8)
(Thiazine)
(Absorption spectra)

2

S/070/63/008/001/019/024
E132/E460

AUTHORS: Melankholin, N.M., Tsinober, L.I.

TITLE: The nature of biaxial crystals of synthetic amethyst

PERIODICAL: Kristallografiya, v.8, no.1, 1963, 110-112

TEXT: It has long been known that amethyst is optically biaxial, whereas quartz is uniaxial. Synthetic amethyst was made from crystals of synthetic quartz by X-ray irradiation and this was biaxial and contained Brazil twins. Plates of this material cut parallel and perpendicular to the Z-axis were examined. Most of the plates were cut from a right handed individual and in them a large number of very small left handed regions could be seen, in the form of triangular platelets, near the twin boundaries. The biaxial properties are only observed near to the twin boundaries. The angle between the optic axes varies from 0 to 7°; the optic orientation also varies and is not fixed to that of the twin boundary. It was shown that the left handed individuals in a right handed matrix do not have exactly the same orientation as the matrix differing usually by 0.7 to 0.8° and sometimes by as much as 1.2°. An explanation of the biaxial optics is given on the above basis. It can be supposed that the Brazil twins form

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S/070/63/008/001/019/024
E132/E460

The nature of biaxial ...

a system like a Fresnel prism and separate the right and left handed circularly polarized rays which pass along the optic axis. This is possible only on the plane perpendicular to the twin boundaries and so this explanation must be rejected. Internal strains are also rejected. A third explanation is on the basis of the difference in orientation between the left and right handed components but 1° disorientation is insufficient to account for the angle of 7° between the optic axes. The matter is not satisfactorily concluded. There is 1 figure.

ASSOCIATION: Institut kristallografii AN SSSR
(Institute of Crystallography AS USSR)

SUBMITTED: June 25, 1962

Card 2/2

ACCESSION NR: AP4009461 S/0051/63/015/006/0781/0784

AUTHOR: Melankholin, N.M.

TITLE: Absorption spectra of liquid crystals of thiazine dyes

SOURCE: Optika i spektroskopiya, v.15, no.6, 1963, 781-784

TOPIC TAGS: absorption spectrum, liquid crystal, thiazine dye, methylene blue, methylene green, novomethylene blue, thionine violet, Lauth violet, dye crystallization

ABSTRACT: In the course of an earlier investigation (N.M.Melankholin, Kristallografiya,6,568,1961) in preparing samples for investigation of the absorption spectra of crystals of thiazine dyes it was discovered that there form in their water solutions liquid crystals. Microscopic investigation of the processes of crystallization showed that such liquid crystals could form in solutions of all the thiazine dyes that were available to the author. In connection with the results obtained in investigating the spectra of these dyes in true crystalline form and in water solutions, it was deemed of interest to obtain their absorption spectra in the form of liquid crystals. Accordingly, in the present study there were obtained the absorp-

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AP4009461

tion spectra of four thiazine dyes, namely, methylene blue, methylene green, novo-methylene blue and thionine (Lauth's) violet, which form more or less stable liquid crystals of the nematic (thread-like) type. The measurements were carried out using liquid crystal films obtained by slow evaporation of drops of water solutions on glass. Uniform sections of the individual films were selected for the measurements. In view of the difficulty in determining the thickness of the films, the values of the absorption coefficient were not calculated and the curves were plotted simply on the basis of the measured values of optical density. The measurements were carried out in polarized light with the aid of the microspectrophotometer constructed by the author (Tr.Inst.kristallogr.,12,186,1956) for the purpose of investigating the absorption spectra of dye crystals. The absorption curves obtained for the liquid crystals are reproduced in a figure. The spectra of the individual dyes are discussed in some detail and compared with the corresponding spectra of the dyes in solution and in the true crystalline state. Contrary to expectation, the spectra of the liquid crystals are more similar to the spectra of the true crystals than to the spectra of solutions of the dyes. It is hypothesized that the absorption spectra of the liquid crystals are due mainly to the absorption of the crystallites composing the liquid crystals. Orig.art.has: 4 figures.

Card 2/2 Sub 25 Feb 63

MELANKHOLIN, N.M.; GUSEVA, I.N.

Scattering of light in certain synthetic crystals. Kristallografiia 8 no.6:884-888 N-D'63. (MIRA 17:2)

1. Institut kristallografii AN SSSR.

MELANKHOLIN, N.M.

Absorption spectra of liquid crystals of thiazine dyes.
Opt. i spektr. 15 no.6:781-784 D '63. (MIRA 17:1)

MELANKHOLIN, N.M.

Pattern of growth and properties of liquid crystals of thiazine dyes. Rost krist. 4:61-67 '64. (MIRA 17:8)

L 42396-65 EWT(l)/EWP(e)/EWT(m)/EWP(i)/T/EWP(t)/EWP(b)/EWA(c)/EEC(b)-2 Pi-4
ACCESSION NR: AP5008465 IJP(c) JD/JG/GG/WH S/0070/65/010/002/0214/0218 41
40
B

AUTHOR: Melankholin, N. M.; Martynova, N. G.

TITLE: On the nature of optical nonuniformities in ruby crystals

SOURCE: Kristallografiya, v. 10, no. 2, 1965, 214-218

TOPIC TAGS: ruby optic material, crystal inhomogeneity, refractive index, interferometry, shadowgraph

ABSTRACT: A luminescent point source and Twyman interferometer were used to study nonuniformities in the refractive indices of ruby rods and plates. The studies were done in polarized light. Shadow patterns of the rods, made with the luminescent point source show two systems of bright bands perpendicular to and parallel with the optical axis of the crystal. These bands were found to correspond principally to mosaic blocks and partially to slip tracks. Shadow patterns were also made of growth layers, usually perpendicular to the axis of growth, but sometimes making less than a 90° angle. The gradual change in the refractive index throughout the specimen was studied with the Twyman interferometer. It was found that these changes are caused chiefly by irregularities in the distribution of chromium.

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L 42396-65

ACCESSION NR: AP5008465

When the chromium content in the specimens is increased, there is an increase in the radial gradient of the refractive index. The edges of mosaic blocks may be seen in interference patterns photographed in polarized light. These appear principally in patterns for the extraordinary wave. Jumps in the extraordinary refractive index as well as stresses at the edges of the blocks cause zigzags in the interference bands. These zigzags are sometimes as much as the width of a band, which means a jump in the refractive index of approximately $4 \cdot 10^{-6}$. Only in rare cases are the edges of the mosaic blocks visible in the interference pattern for the ordinary wave. In these cases, sometimes the edges perpendicular to the optical axis are seen. The conclusions drawn here apply to ruby crystals, however the method used is applicable to studies of nonuniformities in any crystals. Orig. art. has: 5 figures.

ASSOCIATION: Institut kristallografii AN SSSR (Institute of Crystallography, AN SSSR)

SUBMITTED: 19Jun64 ENCL: 00 SUB CODE: SS, OP

NO REF SOV: 003 OTHER: 000

Card 2/2

PUSHCHAROVSKIY, Yu.M.; MELANKHOLINA, Ye.N.

Characteristics of the tectonic structure of the Californian Cenozoic folded zone. Trudy GIN no.89:55-119 '63. (MIRA 18:6)

MELANKHOLINA, Ye.N.

Outline of the geology and tectonic development of the Cenozoic tectonic zones in the western part of Oregon and Washington (U.S.A.). Trudy GIN no.113:137-160 '64. (MIRA 18:9)

MELANKHOLINA, Ye.N.

Outline of the geology of Cretaceous sediments in the Maritime Territory. Trudy GIN no.139:7-29 '65. (MIRA 18:9)

MILAN[illegible]I, W.

"[illegible]thalmologi al Optics in [illegible]alculations", p. 68, [illegible]
Vol. 42, 194[illegible] (published 1952), Warsaw, Poland)

SO: Monthly List of East European Accessions (EEAL), LC, Vol. [illegible], No. [illegible],
March 1955, Uncl.

MELANOWSKI, W.H.

Heredity in ophthalmology. Polski tygod.lek. 5 no.24:934-939 12 June 50. (CIML 20:5)

MELANOWSKI, W.H.

Basic problems of heredity in ophthalmology. Polski tygod.lek. 5 no.26:1021-1025; concl. 26 June 50. (CIML 20:5)

MELANOWSKI, W.H.

Allergy in eye diseases. Polski tygod.lek. 5 no.29-30:1089-1099 24 July 50. (CLML 20:5)

MELANOWSKI, W. H.

EXCERPTA MEDICA Sec.12 Vol.9/10 Ophthalmology Oct55

1606. MELANOWSKI W. H. Klin. Ocznej A. M., Warszawa. *Nowsze dane z dziedziny neurookulistyki i ich znaczenie dla kliniki. Recent news from the field of neuro-ophthalmology and its significance for the clinic POST. OKULISTYKI 1954, 1 (19-34) Graphs 1 Illus. 15

The author calls more attention to the intracranial paths and optic centres. Presenting several of his own cases he points out the peculiarities and significance of this part of the visual apparatus. Finally he recommends careful examination of the visual field and colour sense especially while cooperating with the neurosurgeon.

Szmyt - Łódź

Melanowskiego, W. H

EXCERPT A MEDICA Sec.12 Vol.9/7 Ophthalmology Jul 55

1043. MELANOWSKIEGO W. H. XXIV *Zjazd okulistow Polskich (14-16. X. 1954 r. Warszawa). XXIV th Congress of Polish Ophthalmologists, Warsaw 1954 PANSTW. ZAKL. WYDAWICTW. LEK. (Warszawa) 1954 (3-144)

The first day was devoted to the problem of glaucoma presented by Prof. Sobanski. The author presented the results of personal experiments as well as the works of his clinical team under the title 'Experimental investigations on the outflow of the aqueous humour from the eyeball'. Dr. Segal discussed 'The pathogenesis of glaucoma'. The second day was devoted to the problem of 'Trauma of the eye' which was presented by Prof. Melanowski followed by Prof. Kapuściński who spoke about 'Sympathetic ophthalmia'. Prof. Krwawicz discussed 'The regeneration of the injured cornea and its histological picture'. The third day was devoted to various themes. Fifty-five papers were delivered and discussed. Szmyt - Łódź

EXCERPAT MEDICA Sec.12 Vol.11/10 Ophthalmology Oct57

MELANOWSKI W. H.

1575. MELANOWSKI W. H. Klin. Okulist. A. M., Warszawa. * Urazy narządu wzroku. Injuries of the eye POST. OKULIST. 1956, 3 (131-143) Illus. 18

Review based on personal experience and data from the literature. The question of the removal of non-magnetic foreign bodies from the eye as well as the treatment of thermal and chemical eye burns is amply discussed. The author holds the opinion that prophylactic methods are mostly to be recommended especially while working with some corrosive materials. Szmyt - Łódź

MELANOWSKI, Wladyslaw Henryk; KOBUSZEWSKA-FARYNA, Maria

Considerations on retrolental fibroplasia and its relation to hydrophthalmia. Klin. oczna 26 no.3:199-205 1956.

1. Z Kliniki Ocznej A.M. w Warszawie. Kierownik: prof. dr. W. H. Melanowski I z Zakladu Anatomii Patologicznej A.M. w Warszawie. Kierownik: prof. dr. L. Paskiewicz.
Adres autorow: Prof. W. H. Melanowski, W-wa, ul. Emilii Plater 35, m. 11. Doc. M. Kobuszewska-Faryna, W-wa, ul. Nobla 27, m. 6.

(HYDROPHTHALMOS, complications,
retrolental fibroplasia (Pol))
(RETROLENTAL FIBROPLASIA, complications,
hydrophthalmos (Pol))

MELANOWSKI, Wladyslaw Henryk

Celebration of the 50th anniversary of Lagrange's sclerectomy in Bordeaux. Klin. oczna 27 no.1:73-81 1957.

1. Warszawa, ul. Emilii Plater 35, m. 11.
(SCLERA, surg.
excis., 50th anniversary of Lagrange's operation (Pol))

MELANOWSKI, W.H.

Polish ophthalmology during the period of 15 years of Polish People's Republic. Klin.oczna 29 no.3:229-231 '59.
(OPHTHALMOLOGY)